BODY AND MOTOR

Large Four Passenger Coupe
Has Been Added to 1921

Line.

"Improvements in body design are what would first impress an observer of the new Buick 1921 models," says H. H. Bassett, president and general manager of the Buick Motor Company, "Yet those who are mechanically inclined will find that the changes have not been confined to improved body types alone. The mechanical refinements are many."

The new Buick line includes seven models, four closed and three open body types. A large four passenger coupe is an addition to the Buick 1921 series. The radiator, hood and cowl lines have been improved, to give the cars a low slung, graceful appearance. To make easier the adjustment and care of working parts in the motor and on the chassels a number of improvements have been improved. The machanically inclined will a find that the change have not been improved. The passenger coupe is an addition to the Buick 1921 series. The radiator, hood and cowl lines have been improved. The passenger coupe is an addition to the Buick 1921 series. The radiator, hood and cowl lines have been improved with a warent been improved by the cars a low sung, graceful appearance. To make easier the adjustment and care of working parts in the motor and on the chassels a number of improvements have been improved been improved with a wrench beneath the floor board, while batteries in the closed models are ranged for greater riding comfort. There are two carrying compartments, one back of seat and one beneath rear deck. It is equipped with a tire carrier.

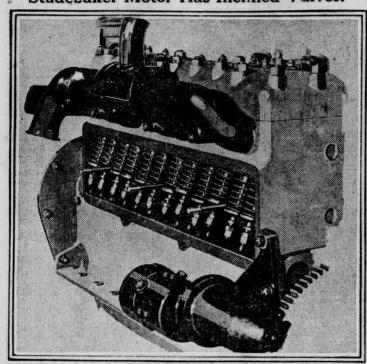
Five Passenger Open Car—Driving compartments are more likewise accessible through a small door in the floor boards. Water can be drained from the radiator by simply turning a handle inside the hood, and

Studebaker Motor Has Inclined Valves.

much in the same way oil can be drained from the crankcase.

The Buick valve-in-head motor, with its automatically lubricated rocker arms, now has its timing gears automatically

Studebaker Motor Has Inclined Valves.



The valves of the Studebaker light six motor are inclined at a twenty degree angle. This is the same construction as in one of America's highest priced cars. The makers of the English Sunbeam have also found that this type of construction produces utmost motor efficiency. Because of this angular position obtained from 3-16 inch cams.

Springs Replace Axle in Parenti.

One of the most unusual of the new cars is the Parenti air cooled automobile manufactured by the Parenti Motors Corporation of Buffalo.

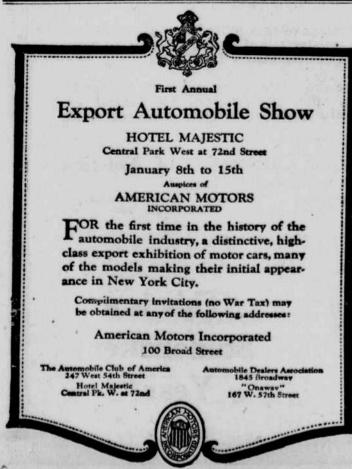
This car replaces the conventional old steel frame chassis and metal body, with a body of five ply wood. The frame consists of two panels of five ply wood itwelve inches wide and three-quarters of an linch thick, which runs the entire length of the body. Cross members are lained to the body. Cross members are lained to the body. According to the company at the structure weights less than 300 pounds; yet is stronger than that of the ordinary car. The company aims at the reduction of unprung weight in order to scure greater mileage on gasolene and tires.

The pressed steel plate that joins the ends of the ply wood from they have been carried from these hangers by means of light forgings, which do not hold them rigidly but allow them to move freely.

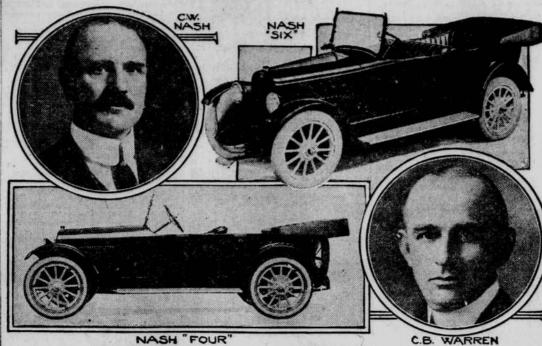
carried from these hangers by means of light forgings, which do not hold them rigidily but allow them to move freely. These springs form flexible axles for the car, eliminating the usual steel axles.

The springs, which are of high vibratory type, extend clear across the front of the car from wheel hanger to wheel hanger. Pressed steel tie rods, each having a bearing at one end on a spring hanger and at the other on a wheel hanger hold the wheels in alignment and compel them to rise and fall vertically. Inasmuch as the springs tend to lengthen as they flatten out their outer ends are colled around eccentric bronze bushings in the wheel hangers, and as the wheele sirse these bushings are forced to turn, inasmuch as their centres are held stationary by the tie rods and thus this apparent lengthening is taken up. This serves a double purpose in that any tendency of the wheels to spread is overcome and the springs are never cramped

One of the most unusual of the new | no matter how large a bump is en-



Nash Cars and the Men Behind Them.



give access to large front and rear com-partment. Doors are large and equipped with double safety latches which are standard equipment in all closed models.

Large Four Passenger Coupe—This is a new addition to line, built on the same chassis as the large seven pas-senger sedan. It is large and roomy. At right and rear of driver's seat is wide seat for two. There is an addi-tional seat to right of driver's seat, with arms, and back rest, which may be arms and back rest, which may be folded under the cowl. There are com-partments back of driver's seat and un-der rear deck.

LIGHT HAYNES CAR MAKES ITS DEBUT

New Model Has Six Cylinder Motor and Accommodates

Dodge Car Runs on Rails.



Haynes Fifty is the famous Haynes light six engine, which gives the smaller and lighter car such power and enables it to develop exceptional speed.

The high, broad-arched hood gives the new car an imposing appearance, while the brilliant lustre of the rich Brewster green finish and the genuine leather upholstery stamp the new car as being fully up to the approved Haynes standards of manufacture and workmanship. The deep, roomy seats are equipped with The deep, roomy seats are equipped with Marshall springs, insuring travel comfort

Motor and Accommodates
folded under the cowl. There are compartments back of driver's seat and under rear deck.

Seven Passenger Open Car—Door openings are wider. Greater room has been obtained in tonneau for two extra passengers by change in design. Two handy folding seats are arranged to give liberal space to all occupants in rear compartment. When not in use they may be folded into back of front seat.

Seven Passenger Sedan—Possesses all desirable refinements of appointments. Upholstery is rich car plush. Two folding seats disappear completely when desired. Altered body lines make for more generous seating arrangements. Ventilation is controlled by adjustable windows and windshield.

Motor and Accommodates

Five Passengers.

Five Passengers.

Seven Passenger Open Car—Door openings are wider. 1921 automobile show is the debut of the long heralded and eagerly awaited smaller and lighter Haynes car which is listed at \$1.985. The Haynes Fifty is lested frame adorns the rear quarter of the top. The curtains are close fitting and open with the doors. Sturdy and powerful, and possessing the typical Haynes open car body lines the rear seat. A heavy pressed steel covering is placed over the gasolene tank and accommodates five passengers.

Dodge Car Runs on Rails.

storm proof and are flush with the body. In either position the ventilators are free from rattle.

The chassis frame is unusually sturdy, consisting of 6 inch channel section side rails of pressed carbon steel with five cross members to insure rigidity and prevent side sway.

Extreme roadability and easy riding qualities are insured by the long semi-eiliptic front and rear springs, designed especially by Haynes engineers.

A new feature of the Haynes Fifty is the electric starter, which is controlled electric starter, which is controlled by a magnetic switch operated by a fin-ger button.

Four cord tires 33 by 4 inches and a

Four cord tires 33 by 4 inches and a spare tire carrier attached to the rear of the frame are standard equipment.

Haynes engineers and designers have been developing the new Haynes Fifty over a long period of years and have incorporated into its design and construction the most advanced ideas of automotive engineering. The appearance of the new Haynes Fifty is creating a marked sensation, and it is reported that the estimated demand for this new Haynes product will run into many thousands of spring car orders.

ACCESSORY STORES TO OPEN IN CITY

United Auto Stores, Inc., Will Establish Fifteen Twenty Branches.

"Within the next six months we es pect to open and have operating at leas fifteen to twenty of our stores in Metropolitan district."

This announcement was made yeste day by E. B. P. Carrier, president of United Auto Stores, Inc., one of tie largest merchandising chain store 53-tems of tire and accessories stores in America, in an interview at the company's New York offices, 18 East Foryfirst street.

America, in an interview at the company's New York offices, 18 East Foryfirst street.

"We are now completing a thorough investigation of trade conditions in his field," continued Mr. Carrier, "and on account of our successful efforts in the last year we feel confident that ournew stores in the New York district willmeet with a ready buying responsiveness. We also intend to install in many small communities on Long Island aid in nearby points our fully equipped agnoies. The opening of our small town agnoies, in addition to our large network of stores, at present located in thity-five cities will eliminate much of the mail order business which has provin sadly acking in the case of accessaries, the urgent necessity of which camot wait urgent necessity of which camot wait upon the parcel post or express.

"Production of automiobiles ind trucks during the next six months pomises to surpass the best boom years if this industry, which means that the attendant consumption of tires and accessories will be greatly increased. When you realize that last year more than one billion dollars worth of automobile supplies were used in this country it is easily understood that the merchandising of this line is far from having reached its limit.

"The advent of the chain store in the retailing of tires and accessories is gradually but effectively removing the fly in the cointment that has heretofore handing the community of the country it is easily understood that the merchandising of this line is far from having reached its limit.

"The advent of the chain store in the retailing of tires and accessories is gradually but effectively removing the fly in the cointment that has heretofore handing the first to feel the impulse of the change. The motor car has taken its place as one of the real necessities of American life."

Dort Optimistic.



NEW GAS FEED SYSTEM.

sparton Fuel Feeder Pumps Gaso-

lene in Proportion Needed. Among announcements of new things the automotive industry during the

last year is the Sparton fuel feeder. This entirely new principle of handling gasolene is not an experiment but the esult of years of research and testing which have demonstrated the correctness of the idea.

By the use of the Sparton fuel feeder gas is pumped surely and steadily in roportion to the needs of the motor. It is operated by a positive force, compression from the cylinder to which it is attached. The compression operates a pump in the fuel feeder tank, and gas is pumped to meet every demand of the

With the Sparton fuel feeder installed there can be no such thing as an exhausted gasolene supply when climbing hills, in mud, sand or snow where the motor is laboring hard at slackened





Here is the Roadster model—one of the members of the family of Dort cars now on view for the first time at the Motor Show.

There is a racy alertness to the smooth-sweeping lines of this model that is in perfect keeping with the ready agility and ease of handling which marks the mechanical quality of the roadster's road performance.

A new seat design adds to your travel comfort and joins with the velvety roadability of the car in bringing you to your destination refreshed and untired in mind and body.

> **Touring Car** Roadster Fourseason Sedan Fourseason Coupe -Open Cars F. O. B. Flint Closed Cars F. O. B. Kalama Wire Wheels and Spare tires extra

New York Branch Broadway at 58th Street

Dort Motor Car Company Flint Mich.

MOTORHORNS

The proof of value in a SPARTON Motorhorn is the. service it gives. One SPARTON, without a single adjustment, is in

service on a car that has done over 129,000 miles.

Another SPARTON, on a car bought in 1914, is daily giving proof of its worth after service on three cars whose combined mileage is over 110,500 miles.

Over forty of the best cars made in America carry SPARTON Motorhorns.

For over five years the cars listed below have been SPARTON equipped:

The Sparks-Withington Company Main Office: Jackson, Michigan

Jackson, Cleveland



Cleveland Offices 622 Swetland Building

rst choice of america's best cars